SBR No OH/21-22
DATED 23-4-21

Original/Duplicate/Triplicate
CONTRACT CERTIFICATE

EE/ELE/Y/BR.No OH/21-22 Dt 23-4-21

No: First and Final Bill (For Other Works) Date.....2020

Division: **Project** Sub-Division: **Electrical**

Bill Received No. Dated Divisional Sub Divisional Cash Book Voucher No..... Dated.....

Work Code: 004-20-000026

Schedule Docket No. Head of Account: **P-3743** CM Nava Nagarothana Grant Est.Cost- **200.00 Lakhs**

Name of Work: **Providing and Fixing LED Lights at Yelahanka Division Ward No.04 Annexure 1 Sl No.58**

Name of Contractor and Full Address: **Sri. Madhusudhan A N M/s Suraksha Electricals**

Reference to Agreement No: **EE(Project)/Ynk Zone/WO/89/2020-21** Date: **24-08-2020**

Certified that the measurements were taken by me on 29/3/2021 and recorded of Pages of measurement Book No. 2571/19-20 and that the work is satisfactorily executed. 2570HO to 2HG

For M/s SURAKSHA ELECTRICALS
Proprietor
Contractor

K.N. Basavaraju
Officer-in-charge of work

Certified that the measurement were taken by me on 29/3/21 and found correct. The work is satisfactorily executed. Certified that the quantities of materials shown in column 3 of Account have been actually brought to site of the work and the contractor has not previously received any advance on this security. These materials are of and imperishable nature and are all required for immediate use on the work in connection with items for finished work have been agreed upon. A normal agreement signed and executed by the contractor is recorded in the office.

Assistant Executive Engineer (Ele)
BBMP, Bangalore
Sub-Division Officer

II Memorandum of Payment

1) Total value of work done or supplies made as per account within
2) Deduct amount to be held in reserve being .....percent Rs.....
3) " Balance
4) Deduct Payment:
   a) Amount of previous payment as in the Office Cash Book Voucher No.....Dated.....S.D. No..... Amount adjusted
   towards cash advance recovery of
   b) Payments / Now made } cost store or other material supplied. / recovery of amount creditable to this/other work / Amount paid on this bill Cheque / Cash.
5) Balance being unpaid value of work done held in reserve.
6) Deduct cash advance made on the Office cash Book Voucher No.. dated.....less adjustments.
7) Net amount due to or from Contractor unadjustments items.
8) Advance to Contractor for materials brought to site (as detailed) within.
9) Value of Government materials supplied.

Total amount adjusted -

Bill=	1,89,09,140=00
IT 1%	1,89,091=00
Twelty 1%	1,89,091=00
CESS 1%	1,8909=00
SGST 1%	1,58,972=00
CGST 1%	1,58,972=00
Rayalty.	28,768=00
deductions =	7,H3,803=00
Cheque =	1,81,65,337=00

For M/s SURAKSHA ELECTRICALS
Proprietor
Contractor's Signature

Received Rs..... (in words).....
.....
by cash and by adjustment of Payment as per memorandum
(in final settlement of all demands)

(For use in the Office)

Witness
1.
2.

For M/s SURAKSHA ELECTRICALS
Proprietor
Stamp

Dated Signature of Contractor

Paid by me by Cheque No.....Dated.....
Cash Rs.....
Dated.....
Initials of Officer making payment

p3743. CM. Nava Nagarothana grant
ರೂ: 1,89,09,140=00
ರೂ: 1,81,65,337=00
ರೂ: 7,H3,803=00

Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

Name of Work: Providing and Fixing LED Lights at Yelahanka Division.

ABSTRACT

Sl No	Description of Work	Unit	As per Modified Schedule - B			Previous Measurement		Present Measurement			Up to date	
			Qty	Rate	Amount	Qty	Amount	Qty	Rate in Rs.	Amount	Qty	Amount
1	Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3	Cum	567.26	201.00	114019.76	-	-	567.26	201.00	114019.76	567.26	114019.76
	Above 125%	Cum	657.73	201.00	132204.68			657.71	201.00	132200.00	657.71	132200.00
2	KSRRB M2100-10: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.89 cum and fine aggregates @ 0.46 cum, in foundation mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days including cost of all materials, labour, HOM of machinery, curing, formworks, scaffolding and centering complete as per specifications	Cum	78.93	5150.00	406463.75	-	-	78.93	5150.00	406463.75	78.93	406463.75
	Above 125%	Cum	28.26	5150.00	145554.45			28.26	5150.00	145555.00	28.26	145555.00
3	Construction of Median and island with Soil taken from Borrow Areas. KSRRB M400-19. Construction of Median and island with Soil taken from Borrow Areas. Construction of Median and island above road level with approved material deposited from borrowpits, spread, sloped and compacted as per Clause 400.7 complete as per specifications. MORTH Specification No. 407	Cum	420.00	210.00	88200.00	-	-	420.00	210.00	88200.00	420.00	88200.00
	Above 125%	Cum	566.10	210.00	118881.00			566.10	210.00	118881.00	566.10	118881.00
4	Providing and fixing pre cast solid cement concrete kerb stones made out of CC 1:2:4 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting including formwork, curing, including cost of materials, labour charges of machinery, loading and unloading, lead and lift, transportation ete.,complete	Nos	4907.00	410.00	2011870.00			4906.00	410.00	2011460.00	4906.00	2011460.00
5	KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8	Sqm	1017.45	80.00	81396.00	-	-	1017.42	80.00	81393.20	1017.42	81393.20

Sl No	Description of Work	Unit	As per Modified Schedule - B			Previous Measurement		Present Measurement			Up to date	
6	Providing and laying in position plain/reainforced cement concrete M20 for sub structure/ Superstructure works, with cement @ 320 kgs, 20 mm & down size graded granite metal coarse aggregate @ 0.69 cum and fine aggregates @ 0.46 cum machine mixed with superplasticisers @ 3ltrs confirming to IS 9103-2008, concrete laid in layers, well compacted and providing weep holes wherever necessary with necessary scaffoldingf, formwork etc., including cost of labour, HOM curing etc., complete	Cum	125.58	5013.00	629512.49	-	-	125.57	5013.00	629459.85	125.57	629459.85
7	KSRRB M2200-6. Providing TMT steel reinforcement Fe500 for R.C.C work including straightening, cutting, bending, hooking, palcing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining memebrs wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. MORTH specification No 1600 & 2200	Tn	4.40	68710.00	301991.44	-	-	4.39	68710.00	301966.19	4.39	301966.19
8	Fabricating, Supplying and errection of decorative bent type Conical Street light pole with hot dip Galvanized with BSEN 10025 grade S 355 JO Steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, Bakelite sheet for MCBs as per IS Specifications.suitable to withstand the wind speed. The total height of the pole 9 mtrs. The pole should have 2 nos of pole esthetically bent either side. The dimensions of the pole bottom 178 mm,at 9 mtrs height 70 mm 3mm thick and one number of 3 mtr height perforated pole having colour changing LED Fixture, inside as suitable to the picture. The base plate size of 350mm x 350mm x 18 mm and the pole shall be galvanized with not less than 65 micron etc and finally finished with paint as required with two different colour. (With out foundation). As per the enclosed pictures and as per IS standards. As per attached Drawing	Nos	93.00	92500.00	8602500.00	-	-	93.00	92500.00	8602500.00	93.00	8602500.00

Sl No	Description of Work	Unit	As per Modified Schedule - B			Previous Measurement		Present Measurement			Up to date	
9	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation.Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 degrees. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/Overload, short circuit/ miss-wiring protection. Compatible for pole mouting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with .....W System Power consumption. LED efficiency>130lm/w, nominal CRI >75.Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body LED Floodlight 150W part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer & Cree/Nichia/Lumileds/Osram make LED Source.	Nos	208.00	11875.00	2470000.00			208.00	11875.00	2470000.00	208.00	2470000.00
10	Supplying of 1.1 KV LT UG cable XLPE or Heat resistant PVC insulated, PVC extruded Inner sheath armoured UG LT cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness in average +5% and resistivity 14 Ohms/Kms (Max) as per IS-3975 3.5 core 25 sqmm	Mtrs	3296.00	185.00	609760.00	-	-	3296.00	185.00	609760.00	3296.00	609760.00
11	Supplying of 1.1 KV LT UG cable XLPE or Heat resistant PVC insulated, PVC extruded Inner sheath armoured UG LT cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness in average +5% and resistivity 14 Ohms/Kms (Max) as per IS-3975 3.5 core 35 sqmm	Mtrs	388.00	227.25	88173.00	-	-	388.00	227.25	88173.00	388.00	88173.00
12	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required In existing trench/duct. 25 sqmm to 75 sqmm	Mtrs	3684.00	15.66	57673.02			3684.00	15.66	57673.02	3684.00	57673.02
13	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc.,complete.(As per Civil SR KSRB I-2, P-7)In soil (ordinary)	Mtrs	2100.00	76.76	161196.00	-	-	2100.00	76.76	161196.00	2100.00	161196.00
14	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc.,complete.(As per Civil SR KSRB I-2, P-7)Asphalt cutting	Mtrs	0.00	114.13	0.00	-	-	0.00	114.13	0.00	0.00	0.00

Sl No	Description of Work	Unit	As per Modified Schedule - B			Previous Measurement		Present Measurement			Up to date	
15	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:confirming to latest amendments 1.5sqmm	Mtrs	5000.00	15.00	75000.00	-	-	5000.00	15.00	75000.00	5000.00	75000.00
	Above 125%	Mtrs	1486.00	15.00	22290.00			1486.00	15.00	22290.00	1486.00	22290.00
16	Supplying and fixing of class A (medium duty) GI pipe of wall thickness not less than .25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV.40mm	Mtrs	30.00	340.00	10200.00	-	-	30.00	340.00	10200.00	30.00	10200.00
17	Supplying and fixing L.T. cast Iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps, bolts, nuts and washers etc.35Sqmm	Nos	6.00	330.00	1980.00	-	-	6.00	330.00	1980.00	6.00	1980.00
18	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes.25 sqmm Long Barrel	Nos	600.00	18.00	10800.00	-	-	600.00	18.00	10800.00	600.00	10800.00
19	Supplying fixing and wiring earth electrode for grounding of lifts, transformers, DG sets etc. using 40mm dia 2.9mm thick 2.5 mtr long GI pipe with GI funnel with mesh and suitable size reducer fixed on the top of the earth electrode.The funnel should be enclosed in a CC chamber of 400x400x400mm with a cast iron cover. The earth electrode shall have staggered holes of 12mm dia and the electrode should be covered 150mm all-round with alternate layers of salt and	Nos	10.00	4200.00	42000.00	-	-	10.00	4200.00	42000.00	10.00	42000.00
	Above 125%	Nos	2.00	4200.00	8400.00			2.00	4200.00	8400.00	2.00	8400.00
20	Supplying and running of GI/Copper strips for grounding connections, using necessary fixing materials as required.600x600x3mm Copper plate	Nos	10.00	7450.00	74500.00	-	-	10.00	7450.00	74500.00	10.00	74500.00
	Above 125%	Nos	2.00	7450.00	14900.00			2.00	7450.00	14900.00	2.00	14900.00
21	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc.,and painted with 2 coats of red oxide and then two coats of approved paint.40x40x6mm	Mtrs	37.20	257.55	9580.86	-	-	37.20	257.55	9580.86	37.20	9580.86
22	Fabricating supplying and mounting MS box made out SWG suitable for floor / wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 7tanks treatment with powder coated paint and finally finished	Sqmm	300000.00	0.35	106050.00	-	-	300000.00	0.35	106050.00	300000.00	106050.00
	Above 125%	Sqmm	221316.00	0.35	78235.21			221316.00	0.35	78236.00	221316.00	78236.00
23	Supplying and fixing Moulded Case Circuit Breaker (MCCB)over the existing wood/panel board using necessary screws,bolts, nuts, necessary phase separators, handle and wiring complete. Protection of Overload and Short circuit with thermal Magnetic/Micro processor release and Earth Fault as per IS-13947. (Icu = Ics)100Amps 25kA.	Nos	6.00	6900.00	41400.00			6.00	6900.00	41400.00	6.00	41400.00
24	Fixing halogen/metal halide / SVL / IL / LED floodlight fitting over existing pole / wall ceiling including clamps, bolts, nuts and wiring using suitable capacity wires.	Nos	208.00	176.75	36764.00	-	-	208.00	176.75	36764.00	208.00	36764.00

Sl No	Description of Work	Unit	As per Modified Schedule - B			Previous Measurement		Present Measurement			Up to date	
25	Supplying and running of GI/Copper strips for grounding connections, using necessary fixing materials as required.25x3mm Copper strip	Mtrs	245.00	500.00	122500.00	-	-	245.00	500.00	122500.00	245.00	122500.00
26	Supplying & fixing of retrofit type - LED bulb.....W with OPAL acrylic diffuser comprising of LED source with CCT 6500 degree K, CRI> 70%. efficacy >80 lumen per watt,life> 25000 burning hours and Compliance to IS 10322/IEC 60598, LM 79 & LM 80. The LED are driven by HF electronic driver integrated in the system, with PF > 0.95, power loss should < 5% of lamp wattage., short circuit & open circuit protection to be integrated in the circuit, THD less than 20%,Life as per LM 79. The operating input voltage should be between 130 to 275 volts. BIS Approved and Tested by ABL/CPRI accredited laboratory with 2 years Warranty against any manufacturing defect working under standard electrical condition 18W, 6500K	Nos	93.00	270.00	25110.00	-	-	93.00	270.00	25110.00	93.00	25110.00
27	Supplying & fixing of Porcelain fuse channel with cut out on existing wooden/panel using necessary nuts, bolts and washers.63Amps	Nos	24.00	230.00	5520.00	-	-	24.00	230.00	5520.00	24.00	5520.00
28	Remotely control and and monitorable smart street light system by using web or mobile application .smart control system has hardware ruggedness over field issues like line cross, line short, lighting and any other irregularities in voltage. It has some features like 1.Remote lighting management.2.Precise lighting turnoff.3.Load ballancing.4.Load power regulation.5.Status tracking. It works on the basis of some of these features 1) Main Control Unit (Mother board) : Handles controlling , data handling and other communication process. 2) Communication unit: GSM/GPRS quad bandwith RS232 interface wireless communication unit 3) Gate Driver Unit: Firing angle controllable board for driving the thyristor 4) Switching Thyristor: SCR 110 AMPS dual thyristor modules for switching	Nos	6.00	55000.00	330000.00	-	-	6.00	55000.00	330000.00	6.00	330000.00
29	Laying of UG Cables by trenchless technology by adopting horizontal boring & Drawing of cable including preparation at site With HDPE Pipe i) Normal soil 5/6" bore size	Mtrs	256.25	899.27	230437.94	-	-	256.25	899.27	230437.94	256.25	230437.94
	Above 125%	Mtrs	99.75	899.27	89702.19			99.75	899.27	89703.00	99.75	89703.00
	EIRL											
E1	KSRRB M200-12.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications.	Cum	136.40	500.96	68328.44	-	-	136.40	500.96	68328.44	136.40	68328.44
E2	Removing and resetting of Kerb Stones.	Mtrs	830.00	105.99	87971.20	-	-	829.40	105.99	87907.61	829.40	87907.61

Sl No	Description of Work	Unit	As per Modified Schedule - B			Previous Measurement		Present Measurement			Up to date	
E3	Cutting of road surface for pipeline trenches and disposing of the excavated stuff as directed including barricading, danger lighting etc., in the broken surface road including cost of materials, labour, ISMI complete as per specifications.	Cum	114.02	480.70	54808.38			114.02	480.70	54808.38	114.02	54808.38
	Total				17805515.18					17804857.37		17804857.37
	GST 12%				1104349.70					1104282.88		1104282.88
	Grand Total				18909763.88					18909140.25		18909140.25

CERTIFICATE

1 Certified that the work done is satisfactorily.

2 There is no departmental issues by BBMP

For M/s SURAKSHA ELECTRICALS

Proprietor

Contractor

For AARTN ASSOCIATES

Authorised Signatory

Consultant

Asst. Engineer

Assistant Executive Engineer (Ele)
BBMP, Bangalore

Asst. Executive Engineer,

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92